BDCP/California Water Fix RDEIR/SDEIS
Comment Form

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No.	Page	Line #	Comment	ICF Response
1	8-33	28	2015 WDR for discharges to Mud Slough have recently been adopted (CVRWQCB 2015).	
2	8-34	13, 37	White sturgeon selenium tissue data have been collected and reported from the SF Bay and Delta recently (Linares-Casanave, Linville et al. 2014). The fish selenium concentrations are at levels that have been shown to cause reproductive toxicity.	
3	8-54		Total mercury concentrations in many Central Valley water bodies and Delta outflow have been to found to have statistically significant positive relationships with flow. If the project alternatives have the ability to adjust flow rates into or out of the Delta, then the analyses should include this type of relationship to estimate mercury concentrations (and other constituents with flow-dependent concentrations) to calculate mass-balances. The assumption that concentrations are conservative and independent of flow rates may not present the true magnitude of impacts caused by alternatives that adjust flow magnitude (Louie, Foe et al. 2008, David, McKee et al. 2009, Wood, Morris et al. 2010).	
4	8-58	33-	Research in the last 10 years has shown that fish are more sensitive to mercury toxicity than previously thought (Beckvar, Dillon et al. 2005, Dillon, Beckvar et al. 2010, Sandheinrich, Bhavsar et al. 2011). It is estimated that fish tissue methylmercury concentrations need to be 0.2 mg/kg (whole body) to be protective of fish health. In addition, the most sensitive endpoint of mercury toxicity is likely to eggs and early-life stages of fish through maternal transfer (<0.02 mg/kg). Current water quality objectives and criteria were only developed to protect humans and other wildlife consumers of fish (e.g., Delta Methylmercury TMDL, SF Bay Mercury TMDL, and CTR). The current analyses should include an evaluation of the impacts of alternatives on mercury toxicity to fish using 0.2 mg/kg (0.02 mg/kg for ELS) or equivalent as a benchmark. As well, the "Existing Surface Water Quality" section should include mercury toxicity and risks to fish.	
5	8-87	11-12	The text states: "The later estimation is recognized as the most reliable calculation of mercury	

			exported from the Delta to date (SFBRWQCB 2006)" However, the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) recognizes David, McKee et al. (2009) as the most reliable calculation. Please revise this citation.	
6	8-87	21-23	The text states: "The Central Valley Water Board has targeted the 110 kg/year total mercury load reduction in its planned implementation of the Delta Methylmercury TMDL (SFBRWQCB 2006)." Wrong reference. Instead cite CVRWQCB (2010).	
7	8-98	10	"Low Toxicity Thresholds" is not one of the 3 categories of exceedance threshold categories said to be evaluated earlier in the paragraph.	
8	8-98	18	The category described previously was "Toxicity Threshold Exceedance" not "Toxicity Level Exceedance".	
9	8-98	19-23	None of the figures display the Toxicity Threshold Exceedance Quotients. Figure 8-65 is monthly average flow.	
10	8-105	42-44	Delta methylmercury export load estimates were developed from monitoring that was conducted from approximately 2000-2006, not only one year of data (Louie, Foe et al. 2008).	
11	8-247	4-31	The State Water Board's Statewide Mercury Control Program for Reservoirs has determined that the magnitude of reservoir level fluctuations has been found to be positively correlated to reservoir fish tissue methylmercury concentrations (SWRCB 2015). If the project operations result in increasing the fluctuations of upstream reservoirs through re-operations, etc., then the project may impact reservoir fish methylmercury concentrations. The current environmental evaluation has not assessed this impact.	
12	8-248	29	Exceedance quotients comparisons should include an evaluation of fish protection benchmarks for mercury (e.g., 0.2 mg/kg adults and 0.02 mg/kg ELS). The evaluation should include assessments for sensitive fish species.	
13	8-249	22	Many major rivers in the Sacramento-San Joaquin River Delta watersheds have significant relationships between flow and total mercury concentrations. See Comment 3.	
14	8-283	29	Sturgeon are biological. The project is predicted to cause hard to green sturgeon, an ESA listed species. Additionally, since sturgeon are indicator species, this analysis indicates that there may be other organisms that feed from the benthic food web (e.g., splittail) which might be at high risk. If it is predicted that sturgeon selenium concentrations may exceed benchmarks and thresholds, then it is possible that	

			these other benthic feeders may be at risk too. Selenium tends to accumulate to a much greater extend in sensitive tissues (e.g., liver, gonads, kidneys) than in muscle, and selenium toxicity has been shown to increase non-linearly. Increasing selenium concentrations from below benchmark thresholds to above thresholds is significant. Furthermore, increasing whole-body concentrations would result in multiple-fold increases in other sensitive tissues, which may have significant effects to the organisms or offspring. It is incorrect to conclude that there are no predicted exceedances of biological effects if Alternatives 4 and 4A would cause an EQ of 1.1 for sturgeon and exceed the lower benchmark. This comment also applies to Alternative 4A water quality analyses and CEQA conclusions.	
15	8-309	41	Similar to comment 11, Delta export loads were estimated from data collected between 2000-2006 (Louie, Foe et al. 2008).	

Literature Cited

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